

43. A purified polypeptide comprising an amino acid sequence selected from the group consisting of:

- a) an amino acid sequence of SEQ ID NO:1 or SEQ ID NO:3,
- b) a naturally-occurring amino acid sequence having at least 90% sequence identity to the sequence of SEQ ID NO:1 or SEQ ID NO:3,
- c) a biologically-active fragment of the amino acid sequence of SEQ ID NO:1 or SEQ ID NO:3, and
- d) an immunogenic fragment of the amino acid sequence of SEQ ID NO:1 or SEQ ID NO:3.

44. An isolated polypeptide of claim 43, having a sequence of SEQ ID NO:1 or SEQ ID NO:3.

45. An isolated polynucleotide encoding a polypeptide selected from the group consisting of:

- a) an amino acid sequence of SEQ ID NO:1 or SEQ ID NO:3, and
  - b) a naturally-occurring amino acid sequence having at least 90% sequence identity to the sequence of SEQ ID NO:1 or SEQ ID NO:3,
- and a polynucleotide complementary thereto.

46. An isolated polynucleotide of claim 45, having a sequence of SEQ ID NO:2 or SEQ ID NO:4.

47. A recombinant polynucleotide comprising a promoter sequence operably linked to a polynucleotide of claim 45.

48. A cell transformed with a recombinant polynucleotide of claim 47.

49. A method for producing a polypeptide selected from the group consisting of:

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a) an amino acid sequence of SEQ ID NO:1 or SEQ ID NO:3, and  
b) a naturally-occurring amino acid sequence having at least 90% sequence identity to the sequence of SEQ ID NO:1 or SEQ ID NO:3,  
the method comprising:

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- i) culturing a cell of claim 48 under conditions suitable for expression of the polypeptide, and
  - ii) recovering the polypeptide so expressed.
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50. A transgenic organism comprising a polynucleotide of claim 47.

51. An isolated antibody which specifically binds to a polypeptide of claim 43.

52. An isolated polynucleotide comprising a sequence selected from the group consisting of:

- a) a polynucleotide sequence of SEQ ID NO:2 or SEQ ID NO:4,
- b) a naturally-occurring polynucleotide sequence having at least 90% sequence identity to the sequence of SEQ ID NO:2 or SEQ ID NO:4,
- c) a polynucleotide sequence complementary to a), and
- d) a polynucleotide sequence complementary to b).

54. A method for detecting a target polynucleotide in a sample, said target polynucleotide having a sequence of a polynucleotide of claim 52, the method comprising:

- a) hybridizing the sample with a probe comprising at least 16 contiguous nucleotides comprising a sequence complementary to said target polynucleotide in the sample, and which probe specifically hybridizes to said target polynucleotide, under conditions whereby a hybridization complex is formed between said probe and said target polynucleotide, and
- b) detecting the presence or absence of said hybridization complex, and, optionally, if present, the amount thereof.

55. A method of claim 54, wherein the probe comprises at least 30 contiguous nucleotides.

56. A method of claim 54, wherein the probe comprises at least 60 contiguous nucleotides.

57. A composition comprising an effective amount of a polypeptide of claim 43 and a pharmaceutically acceptable excipient.

58. A method for screening a compound for effectiveness as an agonist of a polypeptide of claim 43, the method comprising:

- a) exposing a sample comprising a polypeptide of claim 43 to a compound, and
- b) detecting agonist activity in the sample.

59. A pharmaceutical composition comprising an agonist compound identified by a method of claim 58 and a pharmaceutically acceptable excipient.

60. A method for screening a compound for effectiveness as an antagonist of a polypeptide of claim 43, the method comprising:

- a) exposing a sample comprising a polypeptide of claim 43 to a compound, and
- b) detecting antagonist activity in the sample.

61. A pharmaceutical composition comprising an antagonist compound identified by a method of claim 60 and a pharmaceutically acceptable excipient.

65. A method for screening a compound for effectiveness in altering expression of a target polynucleotide, wherein said target polynucleotide comprises a sequence of claim 46, the method comprising:

- a) exposing a sample comprising the target polynucleotide to a compound, and
- b) detecting altered expression of the target polynucleotide.

66. A method for assessing toxicity of a test compound, said method comprising:

- a) treating a biological sample containing nucleic acids with the test compound,
- b) hybridizing the nucleic acids of the treated biological sample with a probe comprising at least 20 contiguous nucleotides of a polynucleotide of claim 52 under conditions whereby a specific hybridization complex is formed between said probe and a target polynucleotide in the biological sample, said target polynucleotide comprising a polynucleotide sequence of a polynucleotide of claim 52,
- c) quantifying the amount of hybridization complex, and
- d) comparing the amount of hybridization complex in the treated biological sample with the amount of hybridization complex in an untreated biological sample, wherein a difference in the amount of hybridization complex in the treated biological sample is indicative of toxicity of the test compound.

✓ 67. A method for detecting a target polynucleotide in a sample, said target polynucleotide having a sequence of a polynucleotide of claim 52, the method comprising:

- a) amplifying said target polynucleotide or fragment thereof using polymerase chain reaction amplification, and
- b) detecting the presence or absence of said amplified target polynucleotide or fragment thereof, and, optionally, if present, the amount thereof.

68. A method for screening a compound for effectiveness in altering expression of a target polynucleotide, wherein said target polynucleotide comprises a sequence of claim 52, the method comprising:

- a) exposing a sample comprising the target polynucleotide to a compound, and
- b) detecting altered expression of the target polynucleotide.